

AMENDMENTS TO THE CLAIMS

Please cancel claims 1-93 of the as-filed application, and add the following claims 94-123 as replacement claims thereof.

1.-93. **(cancelled)**

94. **(new)** A method for preparing and evaluating crystalline inorganic materials, the method comprising

providing ten or more solutions at ten or more discrete regions of a common substrate, respectively, each of the ten or more solutions comprising one or more components of a candidate crystalline inorganic material, the solutions or a component thereof being delivered to the respective regions of the substrate using an automated dispenser,

simultaneously crystallizing one or more components from each of the ten or more solutions to form an array comprising ten or more candidate crystalline inorganic materials at the discrete regions of the substrate, and

screening the ten or more candidate crystalline inorganic materials for a morphological property.

95. **(new)** A method for preparing and evaluating crystalline inorganic materials, the method comprising

providing ten or more solutions at ten or more discrete regions of a common substrate, respectively, each of the ten or more solutions comprising one or more components of a candidate crystalline inorganic material,

crystallizing one or more components from each of the ten or more solutions to form an array comprising ten or more candidate crystalline inorganic materials at the discrete regions of the substrate,

independently controlling the crystallization conditions at a plurality of the ten or more regions of the substrate during the crystallization step, and

screening the ten or more candidate crystalline inorganic materials for a morphological property.

96. **(new)** A method for preparing and evaluating crystalline inorganic materials, the method comprising

providing ten or more solutions at ten or more discrete regions of a common substrate, respectively, each of the ten or more solutions comprising one or more components of a candidate crystalline inorganic material,

crystallizing one or more components from each of the ten or more solutions to form an array comprising ten or more candidate crystalline inorganic materials at the discrete regions of the substrate, and

screening the ten or more candidate crystalline inorganic materials on the substrate for a morphological property.

97. **(new)** The method of claims 95 or 96 wherein the one or more components are simultaneously crystallized from each of the ten or more solutions.

98. **(new)** The method of claims 95 wherein the temperature is controlled at a plurality of the ten or more regions of the substrate.

99. **(new)** The method of claims 94, 95 or 96 wherein the solvent is varied between each of the ten or more regions of the substrate.

100. **(new)** The method of claims 94, 95 or 96 wherein the one or more components are crystallized from each of the ten or more solutions by vaporization of solvent.

101. **(new)** The method of claims 94, 95 or 96 wherein the ten or more materials are screened for a morphological property selected from the group consisting of crystallinity, microstructure, surface topography and crystallite orientation.

102. **(new)** The method of claims 94, 95 or 96 wherein the ten or more materials are screened for crystallinity.

103. **(new)** The method of claim 102 wherein the ten or more materials are screened for crystallinity using Raman spectroscopy, infrared spectroscopy or electron microscopy.

104. **(new)** The method of claims 94, 95 or 96 wherein the ten or more materials are screened for microstructure.

105. **(new)** The method of claims 94, 95 or 96 wherein the ten or more materials are screened for surface topography.

106. **(new)** The method of claims 94, 95 or 96 wherein the ten or more materials are screened for crystallite orientation.

107. **(new)** The method of claims 94, 95 or 96 further comprising screening the ten or more materials for chemical complexation.

108. **(new)** The method of claims 94, 95 or 96 further comprising screening the ten or more materials for chemical reactivity.

109. **(new)** The method of claims 94, 95 or 96 wherein the ten or more materials are screened sequentially.

110. **(new)** The method of claims 94, 95 or 96 wherein the ten or more materials are screened in parallel.

111. **(new)** The method of claims 94, 95 or 96 wherein the ten or more solutions are provided by delivering the ten or more solutions to the ten or more regions of the substrate, respectively, each of the delivered solutions comprising the one or more components in solution.

112. **(new)** The method of claim 111 wherein the ten or more solutions are sequentially delivered to the ten or more regions of the substrate.

113. **(new)** The method of claim 111 wherein the ten or more solutions are simultaneously delivered to the ten or more regions of the substrate.

114. **(new)** The methods of claims 94, 95 or 96 wherein ten or more solutions comprise at least one common component in a gradient of stoichiometries between the ten or more solutions.

115. **(new)** The method of claims 94, 95 or 96 wherein the ten or more crystalline inorganic materials are 100 or more crystalline inorganic materials.

116. **(new)** The method of claims 94, 95 or 96 wherein the ten or more crystalline inorganic materials are 1000 or more crystalline inorganic materials.

117. **(new)** The method of claims 94, 95 or 96 wherein the regions of the substrate are defined by dimples, wells or vessels.

118. **(new)** The method of claims 94, 95 or 96 wherein each of the ten or more material-containing regions of the array have an area of less than about 1 cm^2 on the substrate.

119. **(new)** The method of claims 94, 95 or 96 wherein the ten or more material-containing regions have a spatial density per unit area of greater than about 1 region per cm^2 on the substrate.

120. **(new)** The method of claims 94, 95 or 96 wherein the array of materials consists essentially of the substrate and the ten or more crystalline inorganic materials.

121. **(new)** The method of claims 94, 95 or 96 wherein the substrate is a plate-type substrate.

122. **(new)** The methods of claims 94, 95 or 96 wherein the components are delivered to the regions of the substrate in the form of a slurry.